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ABSTRACT

Based on the assumption that truancy is a discrete form of behavior alterable by manipulation, rather than just a symptom of some underlying problem, an experiment among ninth graders investigated the effect of contingency management (using rewards to effect behavior changes) on truancy. Identification of habitual truants to participate in the study was made during the first phase. In the second phase, participants were subjected to the treatment, contingency management, which consisted of a contract between participants and the school counselor for each participant to have daily class attendance based on a specially formulated reward schedule. In the third phase, the reward system was replaced by group meetings at which attendance and related topics were discussed. In the fourth phase, instead of rewards or conferences, only regular school policy on truancy governed class attendance. Results showed a statistically significant, steady decline in truancy among participants through all phases of the study, while a control group demonstrated no truancy decline. It was suggested that the behavior modification techniques in the second and third phases influenced truancy reduction in the experimental group. In the last phase, the truancy rate was higher for the control group than for the experimental group, but the difference was not statistically significant. (MJL)

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THE EFFECTS OF CONTINGENCY MANAGEMENT AS A MEANS OF REDUCING TRUANCY

A Report
Presented to
The Faculty of the School of Education
San Diego State University

In Partial Fulfillment
of the Requirements for the Course
Education 795 A, Seminar
Master of Arts

by
Louise Hall Spencer -Dunbar
July, 1976

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CHAPTER 1

PROBLEM FORMULATION AND DEFINITION

Society has several goals and objectives. One of these major goals is the education of its young people through the school systems. Gillespie stated:

> One of the primary tasks of a society is to help its young people learn how to become productive citizens. In our society, public education systems assume a major responsibility in meeting this need. A high school education is now considered a virtual prerequisite to becoming a productive adult.
>
> However, it is common knowledge that many young people are dropping out before obtaining a high school diploma. According to reports from the California Department of Education in 1968, nearly one third of the students who entered California high schools dropped out before graduating. Gillespie (1974:1)

Truancy is the forerunner of dropping out. A child who begins to go truant in the eighth grade, usually for one period at first, is taking entire days off in the ninth, and by the tenth or eleventh, has ceased to attend school altogether. This study was concerned with the assessment of a program which would cause the student to change this undesirable behavior to the more desirable behavior of regular attendance through positive reward conditioning, with the expectation that the positive behavior would persist when the reinforcement is discontinued.

BACKGROUND OF THE PROBLEM

Truancy has been a problem in schools since the advent of compulsory education. Prior to the last decade, the "Truant Officer" was a common term. His duties, broadly defined, were to apprehend and return those children to school who were illegally absent from school. Within the last five to ten years, children who have been truant have been referred to the Probation Department, and until the last couple years, have been retained in Juvenile Hall. Now, however, Probation will neither assist in the apprehension of such children nor incarcerate them when they are apprehended by other means. Probation has too many more serious offenses and too few facilities to apprehend and retain truant children.

Therefore, in many cases, truancy has been on the upswing. When children know they not only stand a good chance of not being caught, but also even if they are caught, they will merely be returned to school, there is no incentive for those who are so minded to remain in school.

Additionally, today in many homes both parents work, and it is not at all uncommon for the parents to leave the house for work before the children do. So it becomes extremely easy for the child to remain home. Even though this situation may not exist, when both parents work, it

is difficult, and in some cases, practically impossible, for the school authorities to contact either parent when an absence occurrs. In some few cases, parents are "anti-school" and will sign an excuse for illness of their child when such may not be the case, thus actually encouraging further absences.

PROBLEM STATEMENT

Many students, as they reach junior high school, do not adjust to the school program and lose interest in completing high school, and gradually start to absent themselves. Such absence usually begins with one period or more during the course of the day, or may be an entire day. These absences increase, until, for all practical purposes, the student has dropped out of school.

The following conditions exist presently in the school under consideration:

1. Many young people are dropping out of school before graduating.

2. The "Truant Officer" is a thing of the past.

3. The Probation Department can no longer assist in the apprehension of truancy cases.

4. The communication between school and home is reduced and in some cases non-existent, thereby increasing the opportunities for "successful" truancies.

PURPOSE OF THE STUDY

The purpose of this study was to add to the existing knowledge of school truancy. Traditionally, truancy has been treated as a "symptom." This study rejected the "symptom" concept and concentrated on the modification of the particular behavior itself. More specifically, habitual truants were identified, a contract offered them and a commitment obtained from them involving a change in their attendance patterns, to wit, one of regular attendance. The contract, if the student carried out its provisions, involved certain rewards, with the expectation that said rewards would diminish and cease altogether as regular attendance became a reward in itself.

QUESTIONS

Questions to be asked were:

1. What was the relationship between the truancy rates during the first phase, which is the observation period, and the fourth or last phase, after the students had been exposed to special treatment and conditioning for thirty-four school days?

2. Were there any changes in the truancy rates in any way at all during the second phase and third phase?

3. If there were any changes in the truancy rates in any way at all during the third phase over those of the

second phase, what was the comparison of the truancy rate during the second phase with that of the third phase?

HYPOTHESES

The hypotheses to be tested may be stated as follows:

H_1: There will be a significant reduction in the rate of truancy during the fourth phase over that of the first phase in the experimental group, due to the use of the techniques of behavior modification during the second and third phases.

H_2: There will be a significant difference in truancy rates between the experimental and control groups during the fourth phase.

THEORETICAL FRAMEWORK

One of the major goals of society is to help its young people learn how to become productive citizens. (Gillespie, 1974) Today, a high school education is considered to be one of the best means of bringing this about, and is also necessary for becoming a productive adult. A great many children, however, are failing to complete high school every year, and this is due, in part, to truancy habits formed during the years prior to graduation. This study proposed to utilize the principles of behavior modification to reduce truancy. Behavior modification, or conditioning, is the use of experimentally established principles of learning for the purpose of changing unadaptive behavior. Unadaptive habits are weakened and eliminated; adaptive habits are initiated and strengthened. Wolpe (1969:vii)

Adaptive behavior is defined as behavior which results in an individual's effective interpersonal and environmental interaction. Adaptive responses are those which do not result in abrasion or discomfort to the behaving organism, and which do not precipitate intervention into the individual's life by some authority or other responsible social agent. Wenrich (1970:77) Unadaptive behavior, also referred to as maladaptive, is that behavior which is ineffective or inappropriate in a given context, and which results in an individual's ineffectiveness in his interpersonal and environmental interactions. Wenrich (1970:81)

Behavior modification theories and techniques are largely an outgrowth of the experimental studies and writings of Ivan Pavlov and Edwin Thorndike at the turn of the century. But as O'Leary and O'Leary (1972:9) stated, the man who is most responsible for a reconceptualization of learning principles with implications for many human problems is B. F. Skinner. His book, Science and Human Behavior, 1953, was a major impetus for a drastic rethinking of procedures for changing behavior in schools, hospitals and outpatient facilities.

IMPORTANCE OF THE STUDY

A method whereby children are encouraged to and assisted in remaining in school and finishing high school is obviously a step in the right direction toward helping young people

become productive citizens. It is not to be construed as a panacea for all the ills of education. However, reducing the rate of truancy has two effects which are immediately apparent, one direct and one indirect: (1) the student is in school and receiving instruction, and (2) he does not fall into the habit pattern of missing periods, which become days, which, in turn, leads to dropping out altogether. There is evidence, according to Hockney (1974), to show that the desirable behavior of regular attendance through reward conditioning becomes its own reward, and, as the frequency of reinforcement is reduced, the positive behavior continues.

SCOPE OF THE STUDY

This study included those ninth grade students, male and female, in a junior high school consisting of seventh, eighth, and ninth grades, who were identified as habitual truants. For the purposes of this study, an habitual truant was defined as anyone who had been truant for three or more times during the baseline period, which consisted of the first seven week period of the current school year, 1975-1976, or thirty-four school days. There was no distinction made concerning Intelligence Quotient, prior school record, attendance and achievement, family data, problems with parents, sibling problems, male or female, etc. It was recognized that these may be contributing factors, and they should prove fertile ground for investigation into such possible "reasons" for

going truant and subsequently dropping out of school. Neither time nor resources permitted investigation into all these elements, however, and as stated previously, this study concerned itself with the modification of the behavior itself.

DEFINITIONS

The terms listed below were germane to this study and are therefore defined as follows:

Behavior Modification--"the use of experimentally established principles of learning for the purpose of changing unadaptive behavior." Wolpe (1969:vii)

Contingency Management--"the student will change his undesirable behavior of truancy to the desirable behavior of regular attendance through positive reward conditioning with the expectations that the positive behavior will be persistence with the reinforcement is discontinued.

Unadaptive Behavior--"behavior which is ineffective or inappropriate in a given context, and which results in an individual's ineffectiveness in his interpersonal and environmental interactions." Wenrich (1970:81)

Adaptive Behavior--"behavior which results in an individual's effective interpersonal and environmental interaction." Wenrich (1970:77)

Habitual Truant--anyone who has been truant for three or more times during the baseline period, which consists

of the first seven weeks of the school year, or thirty-four school days.

CHAPTER 2

REVIEW OF LITERATURE

BEHAVIOR

Wenrich defines behavior as the ways people react to their environment and what they do to their environment. He further states:

> Behavior is any elicited or emitted activity of an organism that is observable, or potentially observable, by another organism. This definition includes those responses that are mediated by the autonomic nervous system (involving the smooth muscles and glands), as well as responses controlled by the centrol nervous system and represented both by movements of the sketetal muscles and by the associated interaction of the organism with its environment. (Wenrich, 1970:78)

And finally, he assumes:

> Most behavior, including that which is classified as abnormal, is learned. An additional assumption is that the major variables of which behavior is a function are to be found in the organism's environment, and that a manipulation of these variables will produce the appropriate modifications in the organism's behavior. (Wenrich, 1970:83)

Then we learn from Demak:

> The basic concept is that behavior is a function of its consequences. The future probability that a behavior will occur depends upon its previous consequences. That is, if the consequences of the behavior are positive, it is likely that the performance of the behavior will be increased; if the consequences are negative, it is likely that the performance of the behavior will be decreased. (Demak, 1969:9)

Basic to this entire process is the Skinner paradigm of stimulus-response-reinforcement. (Skinner, 1963). It asserts the unvarying relationship that exists when a stimulus is presented, when that stimulus envokes a response and when that

response is reinforced. This relationship is presented as a law of behavior: when a stimulus evokes a response and that response is reinforced, the stimulus will evoke the same response or one similar to it in succeeding instances.

According to Skinner, about all identifiable behavior falls into one of two categories. The first he calls respondent behavior which refers to all responses that are elicited or drawn out by special stimulus changes in the environment. These are reflex or involuntary behaviors such as dilation and contraction of the pupils of the eye in response to light, or watery eyes when something gets into the eye. For this kind of behavior Skinner identifies a type of learning or conditioning called respondent conditioning, also known as classical conditioning. In general, Skinner believes this kind of conditioning plays little part in most human behavior, and he has little concern for it.

The second kind of behavior is voluntary and is called operant behavior by Skinner. This includes a much greater number of human responses, in fact, most human responses such as walking, writing, or driving a car. Operant behavior takes in all of the things we do that have an effect on or operate on our outside world. When a child reaches for a cookie, or raises his hand in the classroom, or writes a composition, or solves a mathematics problem, his actions are having some effect on his environment. The type of learning associated with operant behavior is operant conditioning. Whereas re-

spondent behavior is controlled by a preceding stimulus, operant behavior is controlled by its consequences--stimuli which follow the response.

Milhollan & Forisha (1972:48) illustrated operant behavior with the example of an infant accidentally touching an object in his crib and hearing a bell sound. He may look toward the sound and then forget it until further "accidents" and tinkles. In time he touches the toy with increasing frequency and looks at it. The above is a simple illustration of the important principle which Thorndike called the Law of Effect and Skinner calls reinforcement. It is through this conditioning process that Skinner believes most behavior is acquired.

BEHAVIOR IS CAUSED

Demak states that people are familiar with the concept of consequences causing behavior. He stated:

> Teachers and parents use rewards and/or punishments as consequences of their children's behavior. Recently, the systematic use of rewards has proven to be an effective tool to modify human behavior. Demak (1969:9)

In the same vein, Becker stated:

> Many persons seem shocked when first exposed to the idea that there are systematic ways of influencing the behavior of others. They find it a difficult idea to accept; it smacks of Brave New World. Actually, the law of reinforcement is no more revolutionary today than the law of gravity. Capitalistic economic systems are built on such a law of behavior. How many teachers would teach if they were not paid for doing so? A paycheck is an important reinforcing consequence for most of us. For most teachers another important reinforcing consequence for teaching is seeing children

> learn. If all our teaching efforts failed, we should very likely quit teaching ("be extinguished for teaching"). The teacher does not have a choice in the question of whether or not her children will be influenced by reinforcing and punishing events. The only choice the teacher has are: (1) to use reinforcement principles systematically to optimally help her children develop, (2) to blindly and haphazardly approach the training of her children, or (3) to leave the training to less competent sources of reinforcement and punishment, such as other children.
>
> Another commonly raised objection to operant conditioning is that the approach is often associated with the use of tangible rewards for improvement in behavior or learning. "I want my children to love learning itself, not just learn in order to get something." Again, remember the paycheck. The children need a payoff, too. The fundamental question here is this: "Suppose the children right now do not work at learning for its own sake? What are you going to do about it?" It so happens that those using operant conditioning principles are able to teach children to work at learning for its own sake. They do this initially by using tangible reinforcers or social reinforcers which can be slowly faded out as task completion becomes reinforcing to children, or until sufficient skills are acquired so that reinforcers of various sorts can be gained from the learning task (e.g., reading a funny story). (Reducing Behavior Problems: An Operant Conditioning Guide for Teachers, Doc. No. 034 570)

Wolpe cites and gives figures and percentages of recoveries or improvements of his own patients and those of Lazarus.

> In my survey (1958) of the results of a private practice of behavior therapy, 89 per cent of 210 patients had either apparently recovered or were at least 80 per cent improved in a mean of about 30 therapeutic sessions....Lazarus reported that of 408 patients who consulted him, 321 (78 per cent), derived marked benefit on "very stringent criteria". Wolpe (1969:268)

He goes on to say, in the same article:

> The opinion is frequently expressed that the effects of behavior therapy are "superficial" and do not remove the basic neurosis, and that relapse and symptom sub-

> stitution are to be expected. This opinion presupposes the truth of the psychoanalytic view of neurosis--a view which there are many reasons to doubt (Wohlgemuth 1923, Salter 1952, Eysenck 1953, Wolpe and Rachman 1960, Wolpe 1961a). After behavior therapy has been successful, recurrence of symptoms is very unusual. Every instance of it that has been investigated has been clearly found to be due to re-conditioning. The only 'relapse' among the 45 patients followed up from two to seven years that I reported in 1958 was in a man who was known to be seeing another psychiatrist. Symptom substitution is only found when therapy is carried out without attention to the autonomic core of ceurotic reactions. Wolpe (1969:277)

BEHAVIOR MODIFICATION

Recently, the term 'behavior modification' has become popular. Behavior modification is merely Skinner's operant conditioning put to use to change a behavior.

> Behavior modification is the systematic application of learning theory and reinforcement principles. The basic premise is: Behavior is governed by its consequences. Only observable behavior is dealt with; fantasies, ego strength, dreams, anxiety, needs, the unconscious, etc., are not considered. They are not observable data. Munoz (1968:1)

Munoz further states: "Behavior modification has to do with: (1) teaching and learning; (2) treatment and remediation; and (3) experimentation and research". And in the same article:

> What are behavior modification techniques? The task of modifying behavior or bringing about behavior changes is accomplished by altering the consequences of behavior.
>
> One technique is to determine the events which reinforce and arrange for them to occur when a desired behavior is approximated. Reinforcement theory holds that any behavior which results in reinforcement will be likely to recur....
>
> There are two general types of reinforcement schedules used to modify behavior. The first is a positive reinforcement schedule characterized by such reinforcers

> as praise, attention, frowns, smiles, which are social reinforcers; and privileges, money, food, television also powerful reinforcers in our culture. Changes in behavior taught by positive reinforcement are relatively rapid and durable. The second type of reinforcement schedule is an aversive schedule of reinforcement characterized by reinforcers such as threats, physical punishment, confinement, ridicule, ostracism, withdrawal of rewards and privileges. This type of reinforcement modifies behavior but the modification will not be long lasting and has several undesirable side effects. Behavior Modification, ERIC, Doc. No. Ed 030 917) Munoz, 1968:6.

Having established that the one best means of modifying behavior is by positive reinforcement, the question arises, how does one go about it? Glaser and Sarason (1970: 16-17) indicate four distinct periods in making a behavior modification chart:

> a. Baseline period. At what rate does the unproductive behavior occur before you introduce reinforcers in the classroom? Once you've decided to help a youngster modify his behavior, you'd like to get on with it. But first you must patiently observe and record his current actions or you won't know what you've subsequently accomplished. A baseline is usually taken for several days or weeks in order to allow for day-to-day variations and to derive reliable estimates of the frequency and intensity of behavior.
>
> b. Reinforcement period. Does the desired behavior increase and undesirable behavior decrease when you give reinforcement (attention, praise, rewards)? Remember, use one kind of reinforcement at a time for one specific behavior. You don't want to confuse things now, after all your work.
>
> c. Reversal period. Is improvement in the pupil's behavior due to the specific reinforcers? Or is it due to some other factor such as influences at home or a different lesson plan? To check these possibilities, discontinue the application of the specific reinforcement for a short period of time. When this is done, undesirable behavior usually increases, and desirable behavior decreases. Now you will know for sure whether

or not the reinforcement program was effective.

> d. Return to the reinforcement period. The return to reinforcement will probably reinstitute the productive level of activity. Glaser and Sarason (ERIC, Doc. No. 049 469)

Wolpe states that Thomas (1968) listed several conditions that relate to the effectiveness of positive reinforcement.

> 1. The response to be reinforced must first be emitted otherwise reinforcement is impossible.
>
> 2. Reinforcement must not be delayed; in general, the more immediate the reinforcement, the better.
>
> 3. Reinforcement of every desired response emitted is most effective for establishing behavior.
>
> 4. Not reinforcing every desired response during response establishment, while less effective in achieving immediate high rates of responding, is generally more effective in producing responses that endure after reinforcement is terminated.
>
> 5. The stimuli suitable to reinforce one individual's behavior may not be the most appropriate for another. Recent research suggest that one important clue to what the reinforcing conditions are in the profile is simply the rank order of activities in which a person engages in his free time (see Premack, 1965; Homme, 1965). Wolpe (1969:223-224)

Becker (1972:1) cites an example of a four year old boy who habitually did such things as kick other people and objects, remove and tear his clothing, speak rudely to people, bother his sister, make threats, hit himself, and become angry very easily.

> Peter's behavior was observed in the home an hour a day for 16 days. During an hour Peter showed 25 to 112 behaviors which mother found objectionable. When Peter misbehaved, mother would often attend to him and try to explain why he should not do so and so. At times

she would try to interest him in some new activity by offering toys or food. (This procedure is called the distraction method for dealing with problem behaviors.) Mother would sometimes punish Peter by taking away a toy or misused object, but Peter was usually able to persuade mother to return the item almost immediately. At times he was placed on a chair for short periods of time as a punishment. Considerable tantrum behavior usually followed such discipline. Mother responded to tantrums with additional arguments, attempting to persuade Peter to stop.

Peter's behavior was changed by the following procedure (Hawkins, Peterson, Schweid, & Bijou, 1966). An observer in the home would cue mother by raising one, two, or three fingers. One finger was raised when Peter showed an objectionable behavior. Mother was instructed that this meant that she was to tell Peter to stop what he was doing (a warning signal). If Peter did not stop, immediately place Peter in his room and shut the door (punishment). He had to stay there until he was quiet for a short period before he could come out. If Peter was playing in a nice way, three fingers were raised. This meant that mother was to go to Peter, give him attention, praise him, and be physically affectionate (reinforcement).

Peter's objectionable behavior dropped to near zero within a few days. Becker (Doc. No. 034 570)

Wenrich reports an instance dealing with the reduction of a conditioned operant tantrum behavior, done by Williams.

The operation in this case is a rather clear instance of the effedtive use of the operant extinction procedure. The subject was a 21-month old boy who had been ill during most of his infancy and, as a result, had been given excessive attention. Unfortunately, though his health was restored, he still demanded the special care and concern that was given during his convalescence. Of particular discomfort to his parents was the boy's insistence that at bedtime they give him unqualified attendance until he fell asleep. This necessitated "dutiful concern" by one of the parents of from one-half hour to two hours at each bedtime. If the parent attempted to leave before the boy fell asleep, the boy began a tantrum and continued to scream and fuss until the parent returned.

It was finally decided that these tantrums should be removed by simply withholding the reinforcement which

> supported this tyrant-like behavior. The reinforcement, in this case, was identified as the parents "return and consequent attention" whenever the screaming and fussing occurred. Extinction, it was felt, could be accomplished by "not returning" whenever a tantrum was in effect--thereby terminating the response-reinforcement contingency.
>
> Thereafter, as Williams reported, the boy was put "to bed in a leisurely and relaxed fashion. After bedtime pleasantries, the parent left the bedroom and closed the door. S (the boy) screamed and raged, but the parent did not re-enter the room." A record was maintained of the duration of each tantrum, and the data showed that the boy's behavior paralleled that of a typical extinction curve. After tantrums were no longer reinforced, the behavior occurred at a high frequency, gradually diminished, and then terminated altogether. By about the tenth "bedtime" after the extinction procedure was begun, "S no longer whimpered, fussed, or cried when the parent left the room. Rather, he smiled as they left. The parents felt that he made happy sounds until he dropped off to sleep." Sometime later, when an aunt put the boy to bed, some tantrum behavior recurred and she inadvertently reinforced it. Data were then gathered on a second extinction series, and by the ninth session the screaming and fussing again dropped to zero. No additional episodes of tantrum behavior have been reported in the two years since the second extinction series was begun. Wenrich (1970:42-43)

Krumboltz and Thoreson (1969) reported a case of changing a young boy's behavior. He was about five years old when he entered the summer Head Start class. After a few days in class, he would tip over another child's glass of juice, pull out the bottom block of a tower, throw all the napkins in the waste basket just after the teacher had set the table, throw the ball outside the fence, etc. Each time such behavior occurred, the teacher scolded him. It was suggested that such behavior be ignored and only appropriate behavior be noticed, and that by giving him attention, verbally or non-verbally. The teachers

reported that this was very difficult, but they stuck to the plan. Therefore, even though the boy ran in the opposite direction when the teacher announced that it was time to go indoors, they ignored him and let him run. The following day the boy came indoors with the others but was the last to do so. Instead of washing his hands and sitting down at the snack table, he played with blocks, building and knocking down towers. He was ignored by both teachers and the other children, who were now following the example set by the teacher, a respected model. The following day, the boy again came in last and went to the block corner, but at the very last instant, he ran to the table. Cookies were gone but some juice was left, and the teacher commented that although the cookies were all eaten she would be glad to give him some juice. The next day the boy came to the table and the teacher sat by him and included him in her conversation. It was noticed that at the same time, the boy's behavior in other areas was becoming more constructive. He no longer threw the ball outside, he built his own block structures rather than knock down others, and his pinching and hitting stopped. He even gave another child a turn on the tricycle. This was all accomplished in less than two weeks and continued throughout the eight week session of the summer Head Start Program. (Krumboltz and Thoreson, 1969)

A schedule of reinforcement refers to the arrangement of reinforcement. Reinforcement might take place after every

response, or it might intermittently succeed a response. This latter might be after so many responses, or it might be after a specified length of time had elapsed. Wenrich (1970) As reported by Wolpe (above), reinforcement of every desired response emitted is most effective for establishing behavior. However, reinforcing intermittently while less effective in achieving immediate high rates of response, is generally more effective in producing responses that endure after reinforcement is terminated.

TOKENS

One of the means of reinforcement is by use of such things as food, toys, special events, etc. These things may be awarded directly or by use of a point system, generally called tokens. Wolf, Giles, and Hall (1968:55) report an experiment using tokens as reinforcers:

> For student KT, after 19 days which established a baseline rate against which to compare the effects of subsequent point manipulations, the maximum number of points which could be obtained from each reading unit was changed from 90 to 52 points. After seven sessions, the number was shifted back to 90 points for eight sessions; then again to 52 points for five sessions; finally back again to 90 points for 10 sessions. Points for student AS were increased from 60 possible points per reading unit to 120 points for 20 sessions and then back to 60 points for six sessions. The differences in design between KT and AS were because AS had never had a rate of reading under previous conditions.
>
> Each of the students was informed about the number of points that he could obtain for correct answers to questions whenever: (1) the number of points were changed, (2) the student inquired about what number of points could be earned, or (3) the student completed as assignment.
>
> Results and discussion. Experimental manipulation of the number of points earned by reading drastically modified the reading rates of both students....

> Each time KT's points for reading were decreased, his rate fell to almost zero. Doubling the number of points that AS could receive produced a modest rate of behavior, even though he had done no reading during the previous month. The results of Experiment 1 indicated that the points functioned as strong reinforcers for KT and AS. (Behavior Research and Therapy, 6:51-64)

In adopting systems which involve the use of stronger reinforcers such as food or toys, it is usually advisable to use some kind of token reinforcement system along with the stronger reinforcers, Becker states:

> The principles guiding the design of token systems may be stated non-technically as follows:
> 1. Reinforcers given immediately are more effective than delayed reinforcers. Tokens should be rapidly and easily administered.
> 2. Tokens or points serve as conditioned reinforcers which can be backed up by many effective reinforcers. The variety of back-up reinforcers increases the probability that reinforcers will be present for different children.
> 3. In building new behaviors, frequent reinforcement is desired. After behaviors are established an intermittent schedule of reinforcement is more effective in maintaining behavior. The token system should permit continuous or intermittent presentation of tokens depending on the progress of the child.
> 4. To reduce the future need for a special reinforcement system, presentation of tokens should be paired with verbal reinforcements, such as "you're right," "good," completing a task, or just working on-task. (Becker Doc. No. 034 570 page 24)

Krumboltz and Krumboltz (1972:224) bring up the ethical question:

> 1. If you reward a child with material objects such as tokens, gifts, candy, or money, won't he then value only material things and not learn to value the intrinsic merits of learning?
> If he is not now engaging in any worthwhile learning activities, the child is not going to discover their intrinsic merits. Somehow he must get started. Contrived rewards such as tokens, candy, or money are simply a way to get him engaged in a new activity which

> may produce its own intrinsic rewards once the child experiences them. Unfortunately they are sometimes continued when they are no longer necessary or desirable. As the child discovers that the activity produces its own rewards (the joy of reading, the excitement of hitting a baseball, the thrill of personally creating a new work of art), the importance of the contrived rewards is greatly reduced.
>
> The best way to get a child to appreciate the intrinsic values of, say, playing the piano is for him to associate pleasant things with piano playing. A child is more likely to enjoy music if he is rewarded for an improved performance than if he is punished for not practicing. Krumboltz and Krumboltz (1972:244)

A report on tokens used as attendance reinforcers is given by O'Leary, etal. (1969:12)

> Comparisons of the attendance records of seven children during the observational days of the token and non-token phases yielded the following results: the average attendance percentage during the 45 observation days of Base, Rules, Educational Structure, Praise and Ignore, and Withdrawal was 86%. The average attendance percentage during the 20 observation days of Token I and Token II was 98%; the average attendance percentage during the 26 observation days of Token I, Token II, and Follow-up (a variant of a token program) was 99%. These attendance records are very encouraging, but because of the usual seasonal variations in attendance and the small sample of children, more definitive evidence is needed before conclusions about the effects of a token program on attendance can be made. (Journal of Applied Behavior Analysis, Spring 1969, 1:3-13)

CONTRACTS

There is nothing secret about the techniques of behavior counseling, the contingencies of reinforcement may be made quite explicit in advance. The behavior contract is a logical outgrowth of specifying reinforcement contingencies in advance.

> Explicit written contracts are a relatively recent contribution to counseling and psychotherapy. Some traditionalists are shocked by the explicit terms and in-

> centives in behavior contracts. In one contract, for example, a disadvantaged student contracted to earn a daily salary simply for attending college with bonus payments for good grades. However, the only differences between this type of contract and a traditional scholarship were that the agreement was explicitly stated in advance and the payments were made weekly. Traditional scholarships also pay money for attending school and for getting good grades, but the payments are made annually and the agreement may not have been written in advance. Krumboltz and Thoreson (1969:88)

Dinoff and Rickard number the requirements of a good contract:

> The first requirement is that all expectations be described explicitly.
>
> Secondly, the contract must be fair in that either member in the therapeutic interaction does not feel abused. An initially fair contract may not be fair at a later date. As a result a therapeutic contract needs to be periodically assessed or renegotiated or both.
>
> Thirdly, the contract must have a goal which is mutually agreed upon. There are occasions when a contract may be met although the end goals of each party are different. Both may be satisfied if their individual goals are met simultaneously.
>
> Fourth, the contract must be reasonable and feasible. Many behavior contracts fail, or, more correctly can never succeed, because the "terms of the contract" are impossible....
>
> Lastly, a therapeutic contract must be concluded with mutual satisfaction and an assessment of the total contractual agreement. It then becomes the paradigm for future and hopefully successful contracts in other settings. Krumboltz and Thoreson (1969:124-125)

Hackney (1974:23) says the behavior contract is a formal agreement between the client and other significant individuals who are affected by or affect the clients behavior. He goes on to say:

> Properly conceived and administered, the contract can be applied to problems that range from truancy to school phobia, from lack of classrocm preparation to academic failure. It is a technique that falls within

> the behavioral strategy usually referred to as self-monitoring (Kanfer 1970) or self-development (Nye & Cormier 1973). The objectives of the behavior contract are (a) to obtain a commitment to a change of behavior, (b) to effect the change under conditions which are clearly specified, and (c) to agree in advance to what the consequences of the change will be for all parties involved....
>
> Several conditions must be met if one is to develop a behavior contract that children or adults can follow. The primary objective of the contract is to gain a commitment to change very specific behavior under specific conditions. Thus, a second objective is to provide the structure within which the change is most likely to occur. (The School Counselor, September 1974, 22: 23-30)

TRUANCY

This study was concerned with behavior modification relating to school non-attendance, or truancy. Tennent (1971:186-189) has found that there seems to be a definite relationship between truancy and delinquency. He reports:

> Sullenger (1930), in a thesis submitted at the University of Missouri, states that 'In Omaha truancy was at the basis of at least 90 per cent of delinquency, while in Columbia two thirds of the delinquents handled by the courts had been in trouble on account of truancy'....
>
> Healy and Bronner (1926) reviewed the records of three groups of repeated offenders in Chicago and Boston. They recognized two types of truanting, from home and from school, with a considerable overlap between the two groups. The figure of 40 per cent is given for both groups....
>
> Also from America we have the Gluecks' (1934) study of 1,000 cases seen at the Judge Baker Clinic.... Of these 1,000 cases, 630 had truanted fairly persistently (64.1 per cent) and 48.9 per cent had also run away from home. This study also showed that 84 per cent were at least one year behind in school attainment compared with 37.8 per cent of the general elementary school population....
>
> The Gluecks (1950), in their mammoth study Unraveling Juvenile Delinquency, matched 500 boys in institutions (i.e. persistent offenders) with 500 non-delinquents on age, intelligence, ethnic origin and area of residence.

> Although 25.8 per cent of the controls had committed some minor infringements of the law only 10.8 per cent of this non-delinquent group had ever truanted as opposed to 94.8 per cent of the delinquent group. 62.3 per cent of this delinquent group started to truant under the age of 11, whereas in the non-delinquent group truancy tended to occur after 11 (70 per cent)....
>
> Adult offenders, too, appear often to have poor school attendance records....Bronwell (1961) states that of the inmates of a Massachusetts prison 75 per cent had been truants from school. Sutherland and Cressey (1960) found that of 2,021 prisoners investigated, 40 per cent had first been committed to an institution because of truancy....
>
> There are, of course, at least three possibilities to be considered regarding any relationship between truancy and delinquency:
>
> 1. Truancy may lead to delinquency as the truanting child with idle time on his hands has to roam the streets in search of food and entertainment and is, therefore, likely to get into mischief' (Mannheum, 1965); or 'is important to the degree that it increases the possibility of contacts with delinquent behavior patterns' (Sutherland, 1960).
> 2. Delinquency may lead to truancy in that the child who has committed an offence may be afraid of going back to school and, indeed, a secondary series of events may be set up in the school which may well make him more likely to reject it.
> 3. Truancy and delinquency may both be symptoms of some deeper maladjustment which shows itself both in committing of crime and the absence from school. (Educational Research, June 1971, 185-189)

CONTINGENCY MANAGEMENT

A study was done by David Brooks, Principal, El Camino High School, La Mirada, California, which was an excellent investigation concerning truancy.

This study employed the use of contingency management as a technique for reducing truancy with twenty high school students. A modified token economy, a contract, and group guidance meetings were combined in an effort to significantly

reduce truant behavior. The use of the token economy, contract, and group guidance meetings resulted in a reduction of truancy from 22.3 days during baseline to 7.1 days during intervention. (95:206-211).

Persons, Scott and others did a series of reports over a three year time span by the Bureau of Elementary and Secondary Education Department, Washington, D. C. and the Georgia State Department of Education, Atlanta, which described the method and results of the program's third year. The three-part program was referred to as the "success technique". The contingency management part consisted of a positive contingency management system designed to deliver a high rate of reinforcement for appropriate social and academic behaviors. (Persons, 1974).

SUMMARY

The general purpose of this project was to add to the existing knowledge regarding school truancy as a psychological model rather than as a medical model. Traditionally, truancy has been treated as a "symptom" of other problems faced by the student. Much research has been done concerning truancy; this study rejects the "symptom" concept and concentrates on the particular behavior being modified and its immediate consequences. For the purposes of this investigation, then, truancy was considered as a discrete behavior alterable by manipulation of its consequences.

This study was conducted at the ninth grade level at Mar Vista Junior High School, San Diego, California. This school is located in the South Bay area, often referred to as Imperial Beach.

A method whereby children were encouraged to and assisted in remaining in school and finishing high school is obviously a step in the right direction toward helping young people become productive citizens. It is not to be construed as a panacea for all the ills of education, however, reducing the rate of truancy has two effects which are immediately apparent, one direct and one indirect: (1) the student is in school and receiving instruction, and (2) he does not fall into the habit pattern of missing periods, which become days, which, in turn, leads to dropping out altogether.

BIBLIOGRAPHY

REFERENCES CITED

Becker, Wesley C. Reducing Behavior Problems: An Operant Conditioning Guide for Teachers. Document No. 034 570

Brooks, B. David. "Contingency Management as a Means of Reducing School Truancy," Education, 95: 206-211, Spring 1975.

Demak, L. S. New Ideas in Michigan Education: Behavior Modification. Document No. Ed 033-184, Educational Resources Information Center, Detroit, Mich.: Wayne County Intermediate School District, 1969.

Gillespie, John B. A Research Proposal Presented to the Graduate Faculty of the School of Human Behavior United States International University, June 1974.

Glaser, Edward M. & Irwin G. Sarason. Reinforcing Productive Classroom Behavior: A Teacher's Guide to Behavior Modification. Document No. 049 469, Educational Resources Information Center. Los Angeles, California: Human Interaction Research Inst., September 1970.

Hackney, Harold. "Applying Behavior Contracts to Chronic Problems." The School Counselor. 22:23-30, September 1974.

Krumboltz, John D., & Helen B. Krumboltz. Changing Children's Behavior. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1972.

Krumboltz, John D., & Carl E. Thoreson, Ed. Behavioral Counseling, Cases and Techniques. New York: Holt, Rinehart and Winston, Inc., 1969.

Milhollan, Frank, and Bill E. Forisha. From Skinner to Rogers. Lincoln, Nebraska: Professional Educators Publications, Inc., 1972.

Munoz, Leo. Behavior Modification. Document No. Ed 030 917, Educational Resources Information Center. Flagstaff, Arizona: Northern Arizona Supplementary Education Center, 1968.

O'Leary, K. Daniel & Susan G. O'Leary. Classroom Management: The Successful Use of Behavior Modification. Pergamon Press, 1972.

O'Leary, K. D. "A Token Reinforcement Program in a Public School: A Replication & Systematic Analysis." Journal of Applied Behavior Analysis. 1: 3-13, Spring 1969.

Persons, Scott, et al. "A Positive Contingency Management Program for Elementary Teachers." Abstract no. ED 093 760, Research In Education, Volume 9: Number 11, November, 1974.

Tennent, T. G., "School Non-Attendance and Delinquency." Education Research (June, 1971), 13:185-189.

Wenrich, W. W. A Primer of Behavior Modification. Belmont, California: Brooks/Cole Publishing Co., 1970.

Wolf, M. M., D. K. Giles, & R. V. Hall. "Experiments with Token Reinforcement in a Remedial Classroom," Behavior Research & Therapy, 6: 51-64, 1968.

Wolpe, Joseph. The Practice of Behavior Therapy. New York: Pergamon Press, 1969.

REFERENCES

Fox, David J. The Research Process in Education. New York: Holt, Rinehart & Winston, Inc., 1969.

Skinner, B. F. Science and Human Behavior. New York: Free Press, 1953.